UK NEQAS
Leucocyte Immunophenotyping

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

All Participant Report

Distribution - 151605 Closing Date - 14 March 2016 Participant ID - 42981

Date Issued - 23 February 2016

Trial Comments

This sample was issued to 296 participants in the LI programme.

Sample Comments

The sample was manufactured by UK NEQAS using a sample of blood from a leukaemia patient which was stabilised and added to a stabilised unit of whole blood.

Results and Performance

Overall Performance Grade (Core Antigens Only)	Performance Status for this Sample	Performance Status Classification Over 6 Sample Period	
		Satisfactory (Grades A-C)	Critical (Grades D-G)
A	Satisfactory	5	1

Please note performance monitoring for this programme is semi-qualitative and is based on the overall performance grade obtained from the consensus immunophenotype on the core antigens. **The robust statistics and z-scores provided below are related to technical performance on individual antigens and are not used for performance monitoring**. Derivation of z-scores requires normally distributed data and the results for this programme vary between normal and abnormal distribution based on the antigens and on a sample to sample basis. Therefore z-scores for antigens with expressions at the extremes of the results scale (around 0% and 100%) may not truly reflect the performance of the antigen and **all z-scores should be viewed as for information purposes only**.

Antigen	Your Results (%)	Your Result Antigen Expression (Positive/Negative)	Consensus Antigen Expression (Positive/Negative)	Robust Mean (%)	Robust SD (%)
CD2	0.00	-	-	0.30	0.35
CD3	0.00	-	-	0.16	0.18
CD5	0.00	-	-	0.57	0.65
CD13	0.00	-	-	0.00	0.00
CD19	40.00	+	+	66.84	31.96
CD20	90.00	+	+	95.42	4.62
CD10	58.00	+	+	28.28	31.82
CD22	50.00	+	+	47.06	37.93
CD79a	15.00	-	+	70.39	26.34
CD79b			+	72.77	26.08
Kappa			+	55.13	45.53
Lambda			-	0.74	0.83
CD43			-	1.45	1.56
CD200			+	40.39	36.77
CD23			-	1.83	1.84
FMC7			+	76.41	21.98
CD45			+	100.00	0.00
CD34			-	0.00	0.00
HLADR			+	92.79	5.96
CD38			-	3.15	3.39

Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

Leukaemia Immunophenotyping (Part 1) Programme

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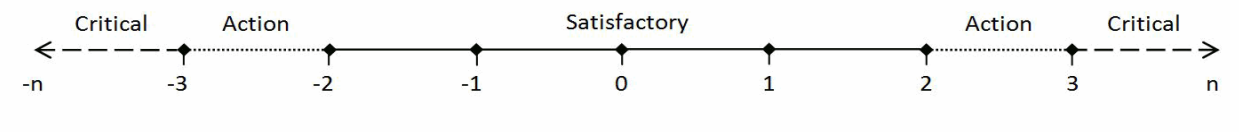
Antigen	z Score*	Performance Status for this Sample	Performance Status Classification Over 6 Sample Period		
			Satisfactory	Action	Critical
CD200		Action			
CD19	-0.84	Satisfactory	5	1	0
CD79a	-2.10	Action			
CD5	-0.88	Satisfactory	4	2	0
CD2	-0.86	Satisfactory	4	1	1
Lambda		Action			
CD10	0.93	Satisfactory			
CD20	-1.17	Satisfactory	5	1	0
CD22	0.08	Satisfactory			
FMC7		Action			
CD79b		Action			
CD34		Action			
CD43		Action			
HLADR		Action			
CD45		Action			
CD13	0.00	Satisfactory	5	1	0
CD23		Action			
CD3	-0.89	Satisfactory	5	1	0
CD38		Action			
Kappa		Action			

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.



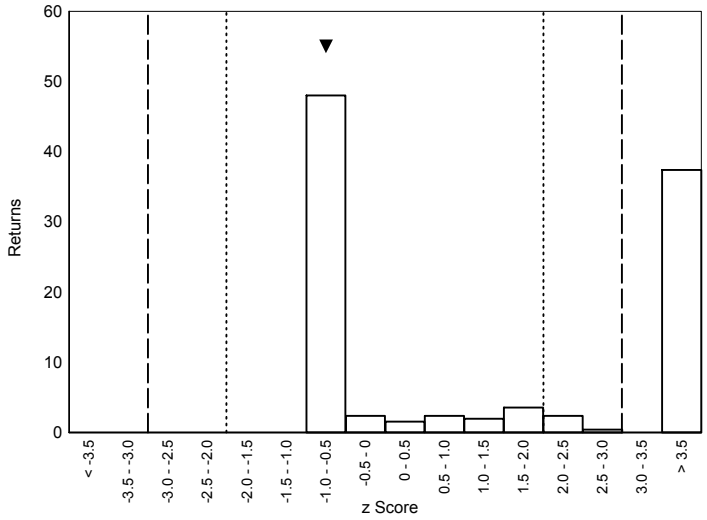
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

Histograms of Participant z Scores

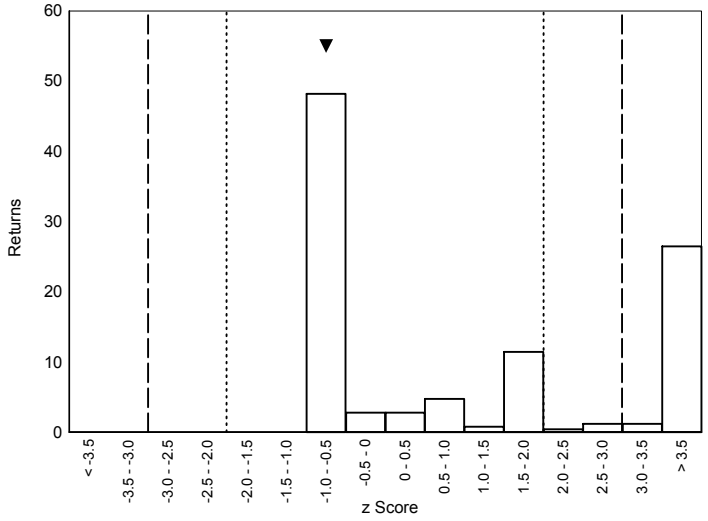
Percentage Values (%) - CD3

Please note ▼ denotes your result



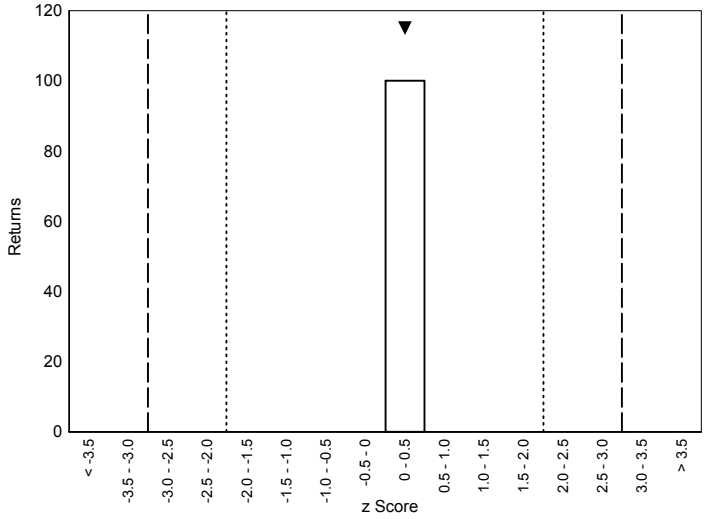
Percentage Values (%) - CD2

Please note ▼ denotes your result



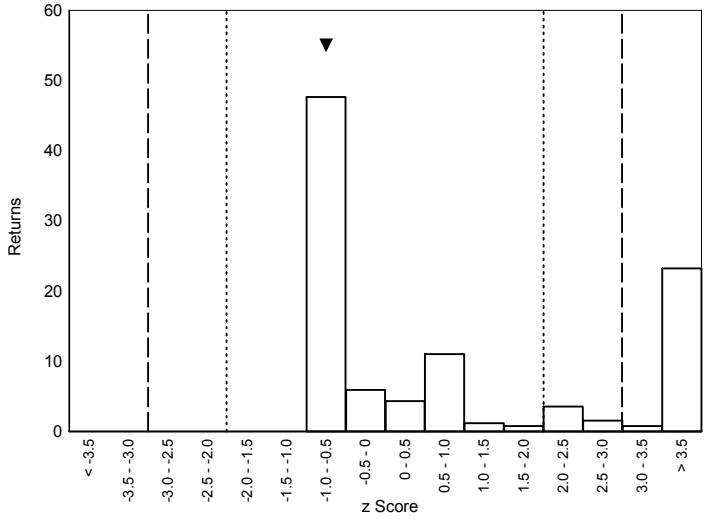
Percentage Values (%) - CD13

Please note ▼ denotes your result



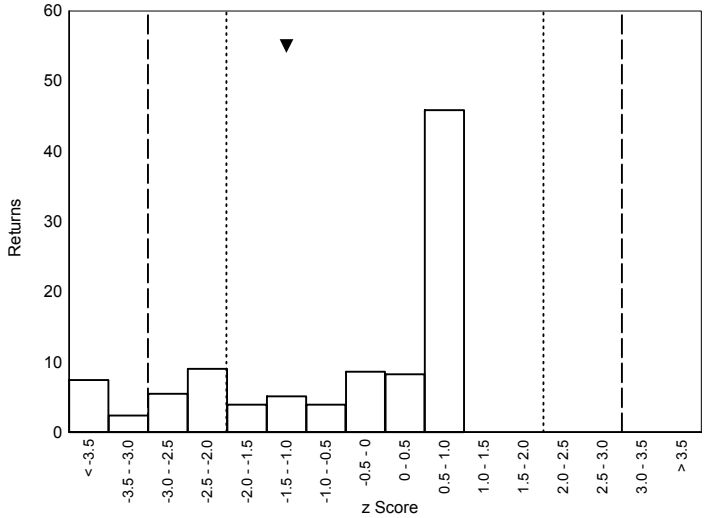
Percentage Values (%) - CD5

Please note ▼ denotes your result



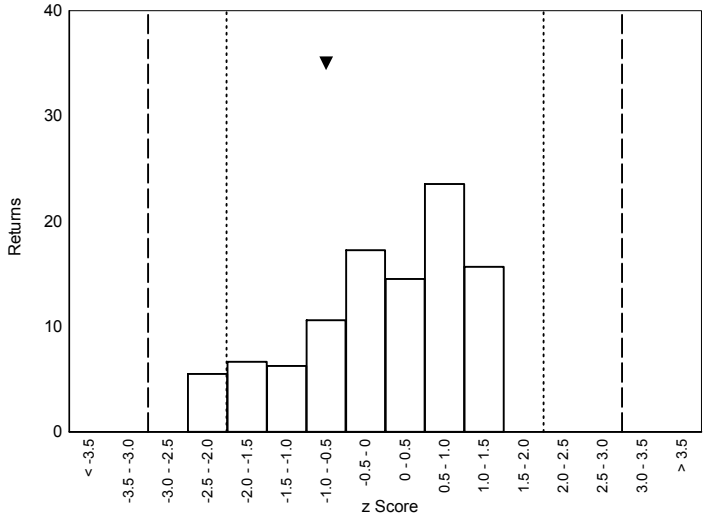
Percentage Values (%) - CD20

Please note ▼ denotes your result



Percentage Values (%) - CD19

Please note ▼ denotes your result



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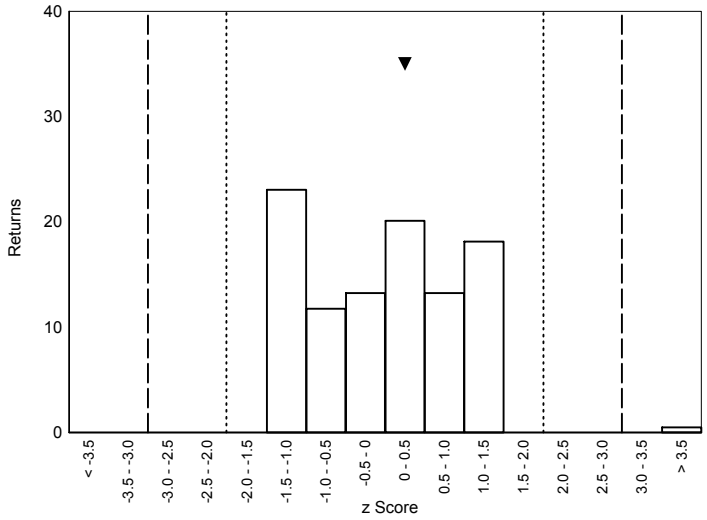
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

Histograms of Participant z Scores

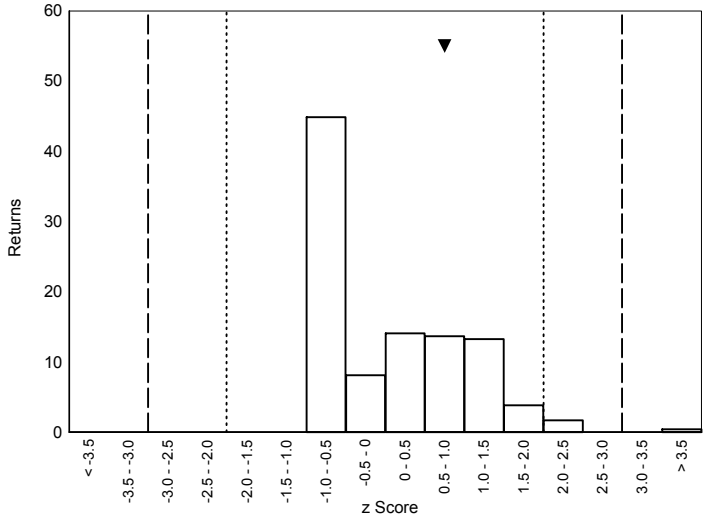
Percentage Values (%) - CD22

Please note ▼ denotes your result



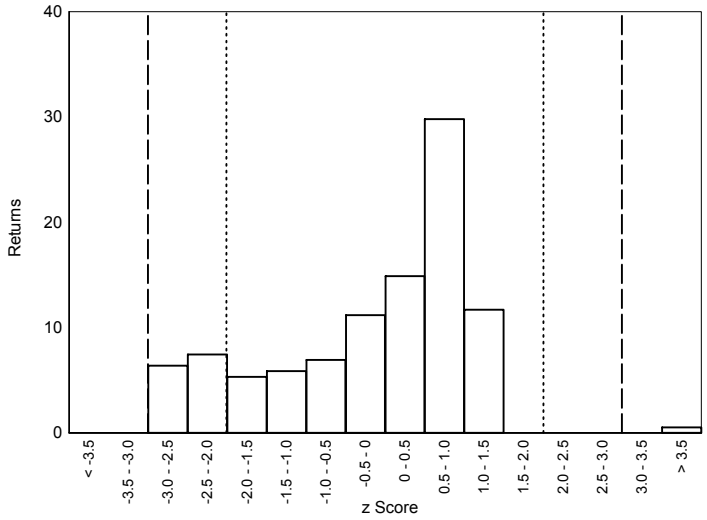
Percentage Values (%) - CD10

Please note ▼ denotes your result



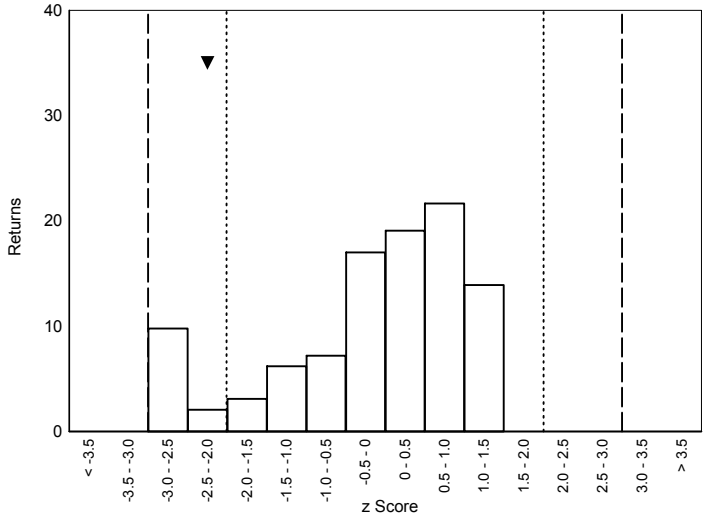
Percentage Values (%) - CD79b

Please note ▼ denotes your result



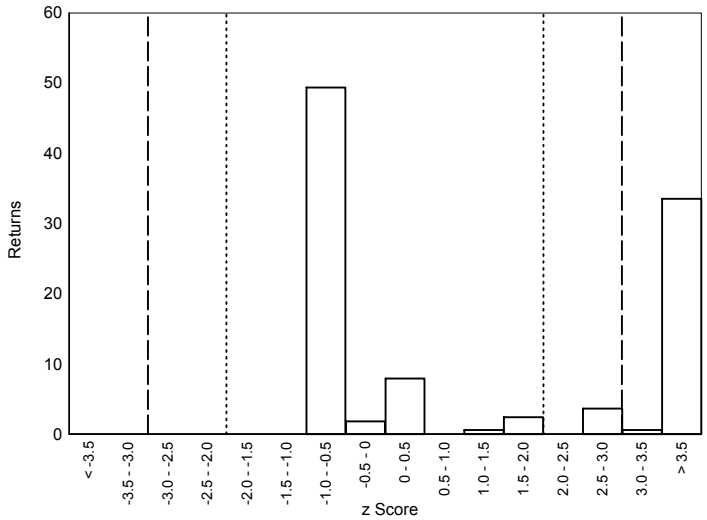
Percentage Values (%) - CD79a

Please note ▼ denotes your result



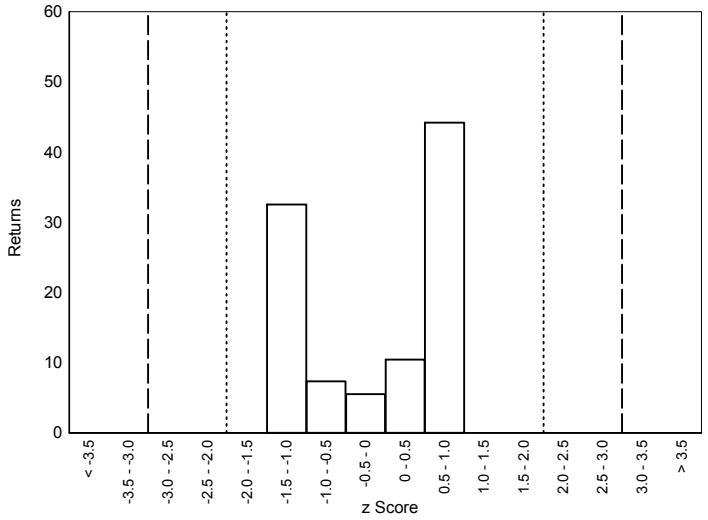
Percentage Values (%) - Lambda

Please note ▼ denotes your result



Percentage Values (%) - Kappa

Please note ▼ denotes your result



Leukaemia Immunophenotyping (Part 1) Programme

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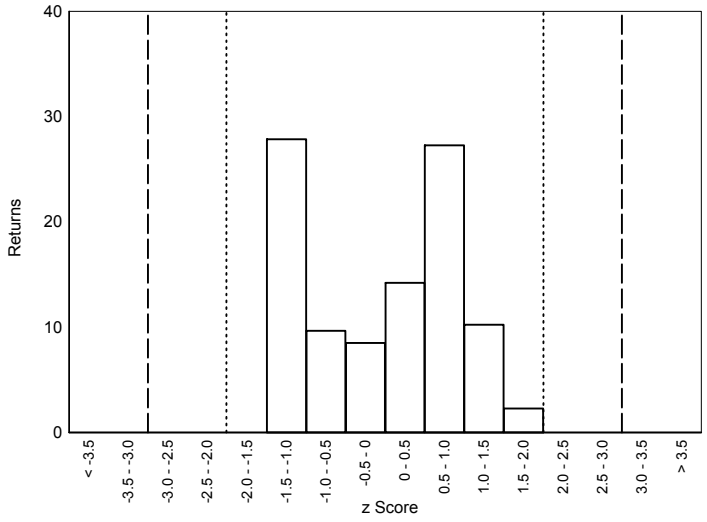
Histograms of Participant z Scores

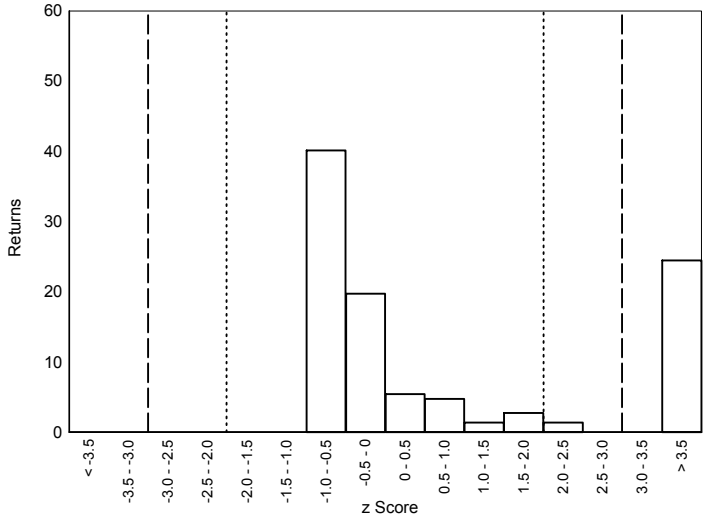
Percentage Values (%) - CD200

Please note ▼ denotes your result



Percentage Values (%) - CD43

Please note ▼ denotes your result



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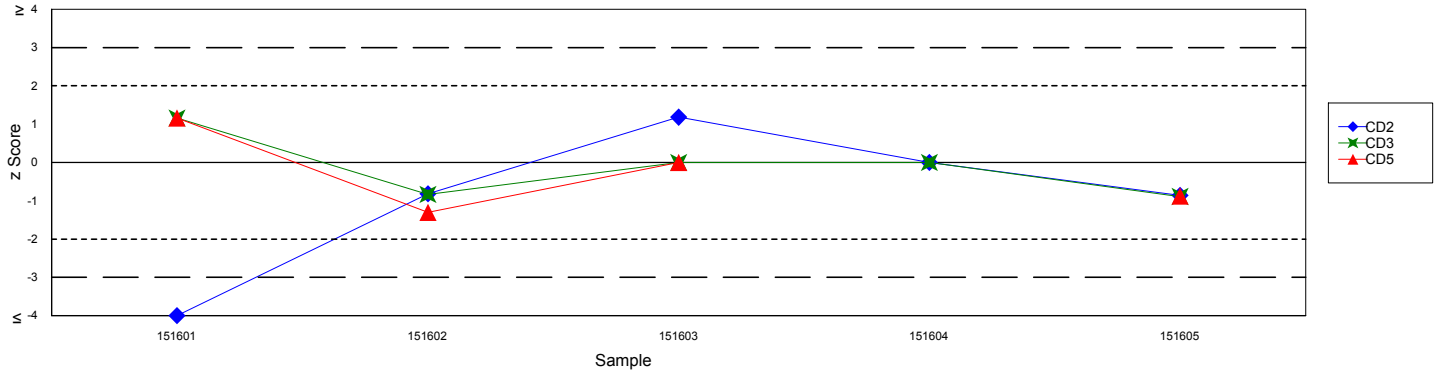
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

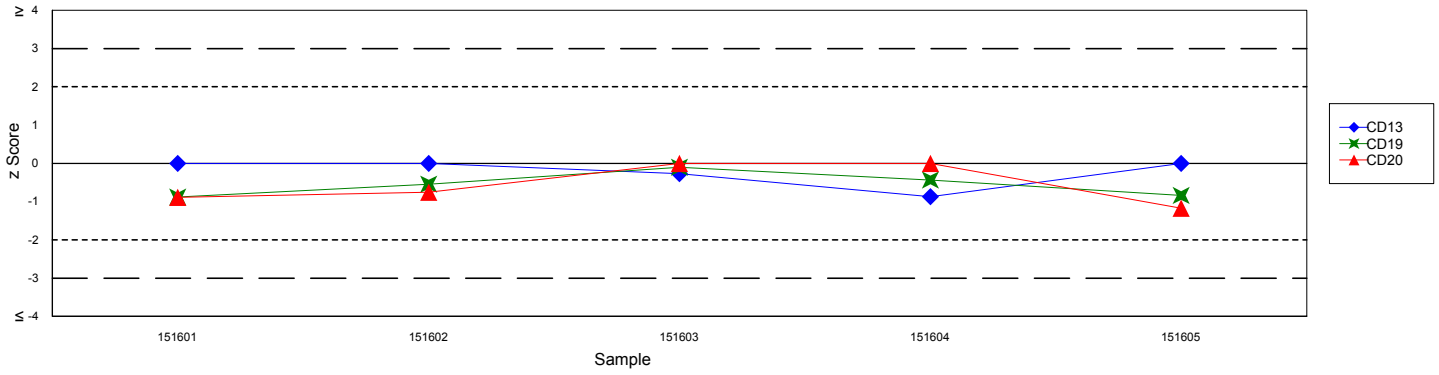
Shewhart Control Charts

(Please note each data point represents a single sample)

Percentage Values (%)



Percentage Values (%)



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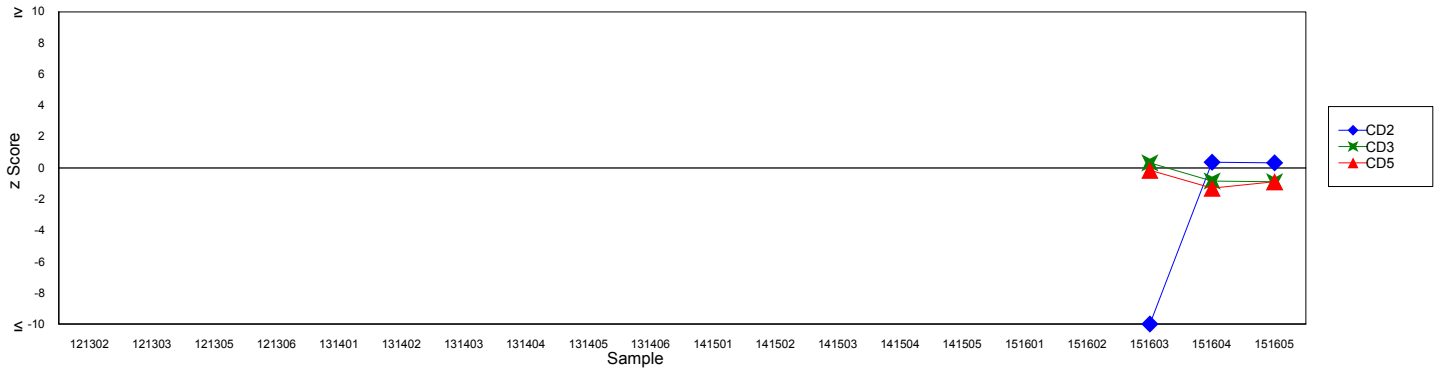
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

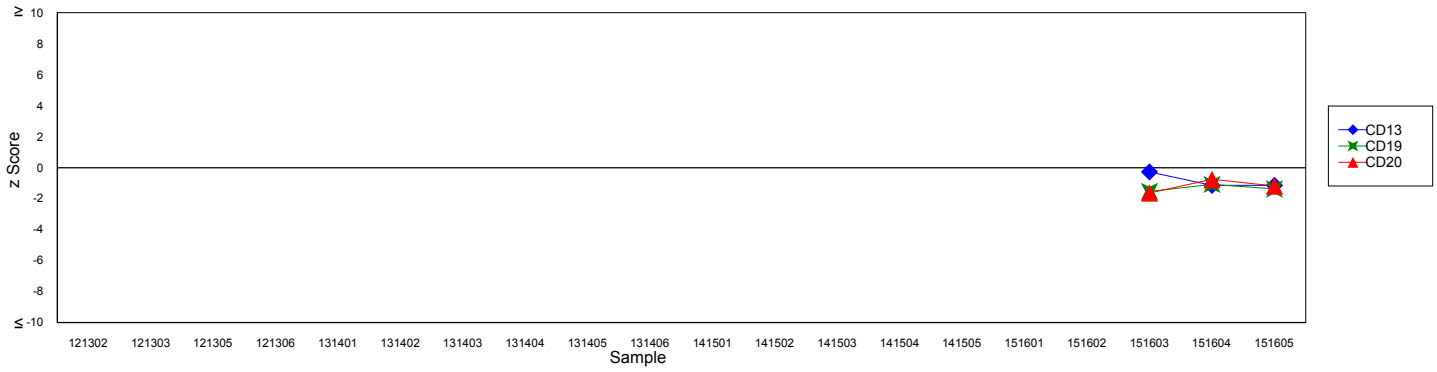
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Percentage Values (%)



Percentage Values (%)



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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD2	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	141	0.0	0.0
Beckman Coulter	81	0.7	0.8

CD3	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	139	0.0	0.0
Beckman Coulter	82	0.6	0.7

CD5	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	144	0.0	0.0
Beckman Coulter	79	1.4	1.6

CD10	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	118	20.5	23.6
Beckman Coulter	87	34.1	33.0

CD13	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	138	0.0	0.0
Beckman Coulter	77	0.0	0.0

CD19	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	118	64.6	33.4
Beckman Coulter	109	70.0	29.0

CD22	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	120	51.3	37.6
Beckman Coulter	52	36.9	36.2

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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD23	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	20	2.2	2.5

CD79a	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	81	57.9	34.7
Beckman Coulter	50	83.1	15.9
Dako	40	73.3	23.0

CD79b	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	113	67.3	30.7
Beckman Coulter	45	87.6	12.1

FMC7	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
Beckman Coulter	20	83.0	13.0

Kappa	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	52	39.4	45.0
Beckman Coulter	26	85.2	14.4
Dako	63	69.4	31.9

Lambda	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	54	1.6	1.7
Beckman Coulter	28	0.2	0.3
Dako	58	0.0	0.0

CD45	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	20	100.0	0.0

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Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD34	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	23	0.0	0.0

CD20	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	139	95.7	4.5
Beckman Coulter	77	92.7	7.5

CD38	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	22	1.9	2.2

CD43	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	71	1.4	1.6
Beckman Coulter	40	3.0	3.4

CD200	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	85	40.8	37.5
Beckman Coulter	26	1.7	1.9
eBioscience	30	52.9	27.5

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Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD2	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	23	0.0	0.0
FITC	120	0.3	0.3
PE	44	0.0	0.0
PE-CY7	38	1.5	1.6

CD3	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	46	0.2	0.2
FITC	48	0.5	0.5

CD5	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	31	0.0	0.0
FITC	50	1.3	1.5
PE	36	1.2	1.4
PE-CY7	30	0.7	0.8
PerCP-CY5.5	44	0.0	0.0

CD10	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	48	27.7	30.0
FITC	26	0.0	0.0
PE	95	44.5	29.1
PE-CY7	38	0.1	0.1

CD13	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
PE	173	0.0	0.0
PE-CY7	20	0.0	0.0

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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD19	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	33	73.2	24.5
ECD	26	62.8	36.6
PE	28	71.8	22.4
PE-CY7	84	70.1	28.3

CD22	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	55	54.5	33.3
FITC	29	0.2	0.2
PE	77	60.6	27.0

CD23	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
PE	26	3.0	3.4

CD79a	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	20	79.3	13.3
PE	130	73.5	23.3

CD79b	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	42	81.0	15.2
FITC	32	52.5	40.7
PE	71	86.7	12.8
PerCP-CY5.5	26	33.3	25.9

FMC7	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
FITC	38	79.3	18.8

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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151605

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

Kappa	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
FITC	96	71.3	29.8
PE	52	44.5	45.8

Lambda	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
FITC	58	15.8	17.4
PE	101	0.0	0.0

CD20	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	27	95.4	4.6
FITC	56	96.5	3.4
Pacific Orange	27	96.5	4.0
PC5.5	29	98.0	2.3
PE	21	89.1	10.1

CD43	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
Alexa 750	30	1.5	1.6
FITC	67	1.5	1.5

CD200	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	55	51.1	29.7
PE	78	51.6	26.7

Information with respect to compliance with standards BS EN ISO/IEC 17043:2010

4.8.2 a) The proficiency testing provider for this programme is:
UK NEQAS for Leucocyte Immunophenotyping
Pegasus House, 4th Floor Suite
463A Glossop Road
Sheffield, S10 2QD
United Kingdom
Tel: +44 (0) 114 267 3600, Fax: +44 (0) 114 267 3601
e-mail: nicola.rose@ukneqasli.co.uk

4.8.2 b) The coordinators of UK NEQAS LI programmes are Prof David Barnett and Mr Liam Whitby.

4.8.2 c) Person(s) authorizing this report:
Prof David Barnett, Director or Mr Liam Whitby, Operations Manager of UK NEQAS LI

4.8.2 d) No activities in relation to this EQA exercise were subcontracted.

4.8.2 g) The UK NEQAS LI Confidentiality Policy can be found in the Quality Manual which is available by contacting the UK NEQAS LI office. Participant details, their results and their performance data remain confidential unless revealed to the relevant NQAAP when a UK participant is identified as having performance issues.

4.8.2 i) All EQA samples are prepared in accordance with strict Standard Operational Procedures by trained personnel proven to ensure homogeneity and stability. Where appropriate/possible EQA samples are tested prior to issue. Where the sample(s) issued is stabilised blood or platelets, pre and post stability testing will have proved sample suitability prior to issue.

4.8.2 l), n), o), r) & s) Please refer to the UK NEQAS LI website at www.ukneqasli.co.uk for detailed information on each programme including the scoring systems applied to assess performance (for BS EN ISO/IEC 17043:2010 accredited programmes only). Where a scoring system refers to the 'consensus result' this means the result reported by the majority of participants for that trial issue. Advice on the interpretation of statistical analyses and the criteria on which performance is measured is also given. Please note that where different methods/procedures are used by different groups of participants these may be displayed within your report, but the same scoring system is applied to all participants irrespective of method/procedure used.

4.8.2 m) We do not assign values against reference materials or calibrants.

4.8.2 q) Details of the programme designs as authorized by The Steering Committee and Specialist Advisory Group can be found on our website at www.ukneqasli.co.uk. The proposed trial issue schedule for each programme is also available.

4.8.2 t) If you would like to discuss the outcomes of this trial issue, please contact UK NEQAS LI using the contact details provided.